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## PATENT ABSTRACTS OF JAPAN

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## (54) MANUFACTURE OF **SEMICONDUCTOR THIN** FILM

(57) Abstract:

PURPOSE: To abruptly form a profile of impurity by forming the first layer film, then removing by etching the first layer film surface by XeF2 molecular beam, and subsequently growing the second layer film.

CONSTITUTION: After the first layer film is formed, the second layer film is subsequently grown, a transient region which contains transient impurity from the surface of the first film is formed, the film growth is then stopped, the transient region is then removed by etching by XeF2 molecular beam, and then the second layer film is again grown. After the first layer film is formed, the first layer film surface is removed by etching with XeF2 molecular beam, and the second layer film is then grown. Thus, a thin film which has an abrupt profile of impurity is obtained.

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